IN THE CLAIMS

Change Claim 14 to read as follows:

Claim 14. (~~amended~~) A heart valve prosthesis comprising an annular valve body having a central passageway therethrough which is designed to be mounted to permit the flow of blood therethrough in a predetermined downstream direction, and

a pair of leaflets which are supported by pairs of guides in opposed elongated depressions upon said annular valve body for substantially pivotal movement on eccentric axes between a closed position blocking blood flow through said central passageway and an open position allowing blood flow therethrough in said predetermined downstream direction, the locations of said eccentric axes shifting relative to said valve body in a downstream direction as said leaflets pivot to the open position,

said leaflets each including a major body portion which is a section of a tube having a curved sidewall and being mounted with their concave surfaces facing each other in the open position and facing downstream in the closed position, said axes being located substantially upstream of the center of gravity of said leaflets when said leaflets are in the open position, and

said valve body being formed with stop means exterior of said depressions which is positioned downstream of said location of said eccentric axes in said closed position.

Cancel Claim 15.

Claim 16, line 7, correct the spelling of "downstream".

Add The Following New Claim:

Claim 13. A heart valve prosthesis comprising an annular valve body having a central passageway therethrough which is designed to be mounted to permit the flow of blood therethrough in a predetermined downstream direction, and

P1 a pair of leaflets which are supported by pairs of elongated guides in opposed elongated depressions upon said annular valve body for a substantially pivotal movement on eccentric axes between a closed position blocking blood flow through said central passageway and an open position allowing blood flow therethrough in said predetermined downstream direction, the locations of said eccentric axes shifting relative to said valve body in a downstream direction as said leaflets pivot to the open position,

P1 said leaflets each including a major body portion which is a section of a tube having a curved sidewall and being mounted with their concave surfaces facing each other in the open position and facing downstream in the closed position, said axes being located substantially upstream of the center of gravity of said leaflets when said leaflets are in the open position, and

P1 said depressions each having a straight edge along which said guide lies in the closed position, a straight edge along which said guide lies in the open position and an arcuate edge along which a downstream end of said guide travels as said leaflets pivot from the closed to the open position, said arcuate edge being located farther from a plane through the centerline of the passageway than said pivot axes.

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